

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Attorney Docket Number	6884-66364
Application Number	10/632,495
Filing Date	July 31, 2003
First Named Inventor	Brian K. Aegerter
Art Unit	Not yet assigned
Examiner Name	Not yet assigned

U.S. PATENT DOCUMENTS

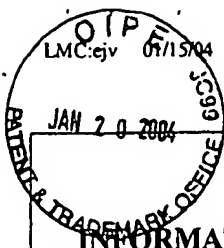
Examiner's Initials*	Cite No. (optional)	Number	Date	Name
LV		2,443,599	6/1948	Chester
		3,664,933	5/1972	Clauss
		3,716,462	2/1973	Jensen
		3,727,620	4/1973	Orr
		3,770,598	11/1973	Creutz
		3,878,066	4/1975	Dettke et al.
		3,894,918	7/1975	Corby et al.
		3,930,963	1/1976	Polichette et al.
		3,953,265	4/1976	Hood
		4,000,046	12/1976	Weaver
		4,027,686	6/1977	Shortes et al.
		4,092,176	5/1978	Kozai et al.
		4,110,176	8/1978	Creutz et al.
		4,113,492	9/1978	Sato et al.
		4,132,567	1/1979	Blackwood
		4,134,802	1/1979	Herr
LV		4,250,004	2/1981	Miles et al.

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LMC:ejv 07/15/04 6884-66364 P00-0024US4 235301

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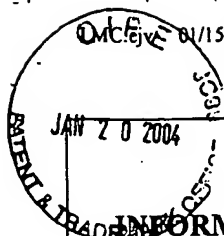
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LV		4,315,059	2/1982	Raistrick et al.
		4,336,114	6/1982	Mayer et al.
		4,376,685	3/1983	Watson
		4,405,416	9/1983	Raistrick et al.
		4,428,815	1/1984	Powell et al.
		4,435,266	3/1984	Johnston
		4,437,928	3/1984	Wong
		4,439,243	3/1984	Titus
		4,439,244	3/1984	Allevato
		4,466,859	8/1984	Nelson
		4,489,740	12/1984	Rattan et al.
		4,510,176	4/1985	Cuthbert et al.
		4,518,678	5/1985	Allen
		4,519,846	5/1985	Aigo
		4,539,222	9/1985	Anderson Jr. et al.
		4,544,446	10/1985	Cady
		4,560,445	12/1985	Hoover et al.
		4,576,689	3/1986	Makkaev et al.
LV		4,664,133	5/1987	Silvermail et al.

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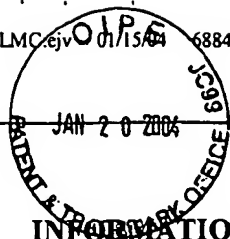
LV		4,687,552	8/1987	Early et al.
		4,693,805	9/1987	Quazi
		4,732,785	3/1988	Brewer
		4,750,505	6/1988	Inuta et al.
		4,779,877	10/1988	Shaw
		4,781,801	11/1988	Frisby
		4,790,262	12/1988	Nakayama et al.
		4,838,289	6/1989	Kottman et al.
		4,891,069	1/1990	Holtzman et al.
		4,903,717	2/1990	Sumnitsch
		4,959,278	9/1990	Shimauchi et al.
		4,962,049	10/1990	Chang et al.
		4,982,215	1/1991	Matsuoka
		4,982,753	1/1991	Grebinski Jr. et al.
		5,017,271	5/1991	Whewell et al.
		5,020,200	6/1991	Mimakasa et al.
		5,028,513	7/1991	Murakami et al.
		5,032,217	7/1991	Tanaka
LV		5,039,381	8/1991	Mullarkey

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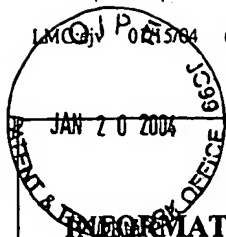
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LV		5,040,484	8/1991	Mears et al.
		5,055,425	10/1991	Leibovitz et al.
		5,075,256	12/1991	Wang et al.
		5,084,412	1/1992	Nakasaki
		5,091,339	2/1992	Carey
		5,115,430	5/1992	Hirai et al.
		5,117,769	6/1992	DeBoer et al.
		5,145,571	9/1992	Lane et al.
		5,151,168	9/1992	Gilton et al.
		5,155,336	10/1992	Gronet et al.
		5,160,600	11/1992	Patel et al.
		5,162,260	11/1992	Leibovitz et al.
		5,164,332	11/1992	Kumar
		5,168,886	12/1992	Thompson et al.
		5,209,180	5/1993	Shoda et al.
		5,209,817	5/1993	Ahmad et al.
		5,222,310	6/1993	Thompson et al.
		5,224,503	7/1993	Thompson et al.
LV		5,224,504	7/1993	Thompson et al.

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LV		5,230,743	7/1993	Thompson et al.
		5,249,728	10/1993	Lam
		5,252,807	10/1993	Chizinsky
		5,256,274	10/1993	Poris
		5,259,407	11/1993	Tuchida et al.
		5,277,985	1/1994	Li et al.
		5,290,361	3/1994	Hayashida et al.
		5,298,465	3/1994	Levy
		5,314,756	5/1994	Tagaya
		5,316,802	5/1994	Ebe et al.
		5,316,974	5/1994	Crank
		5,328,589	7/1994	Martin
		5,349,978	9/1994	Sago et al.
		5,361,449	11/1994	Akimoto
		5,368,711	11/1994	Poris
		5,372,848	12/1994	Blackwell et al.
		5,377,708	1/1995	Bergman et al.
		5,397,741	3/1995	O'Connor et al.
LV		5,421,893	6/1995	Perlov

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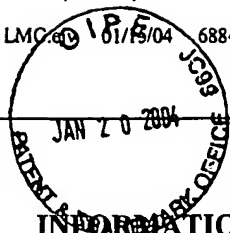
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LV		5,429,733	7/1995	Ishida
		5,431,421	7/1995	Thompson et al.
		5,431,803	7/1995	DiFranco et al.
		5,441,618	8/1995	Matsuda et al.
		5,445,172	8/1995	Thompson et al.
		5,447,599	9/1995	Li et al.
		5,472,502	12/1995	Lowery
		5,500,081	3/1996	Bergman
		5,508,881	4/1996	Stevens
		5,513,594	5/1996	McClanahan et al.
		5,532,094	7/1996	Arimura et al.
		5,549,808	8/1996	Farooq et al.
		5,551,986	9/1996	Jain
		5,591,262	1/1997	Sago et al.
		5,600,532	2/1997	Michiya et al.
		5,605,615	2/1997	Goolsby et al.
		5,608,943	3/1997	Konishi et al.
		5,612,254	3/1997	Mu et al.
LV		5,616,069	4/1997	Walker et al.

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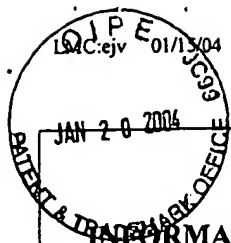
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LV		5,625,170	4/1997	Poris
		5,627,102	5/1997	Shinriki et al.
		5,639,316	6/1997	Cabral Jr. et al.
		5,651,823	7/1997	Parodi et al.
		5,651,865	7/1997	Sellers
		5,666,985	9/1997	Smith Jr. et al.
		5,674,787	10/1997	Zhao et al.
		5,677,244	10/1997	Venkatraman
		5,677,824	10/1997	Harashima et al.
		5,678,116	10/1997	Sugimoto et al.
		5,693,563	12/1997	Teong
		5,705,223	1/1998	Bunkofske
		5,707,466	1/1998	Atwater et al.
		5,718,763	2/1998	Tateyama et al.
		5,718,813	2/1998	Drummond et al.
		5,723,028	3/1998	Poris
		5,733,024	3/1998	Slocum et al.
		5,747,355	5/1998	Konuma et al.
LV		5,762,708	6/1998	Motoda et al.

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6884-66364 P00-0024USA 235301

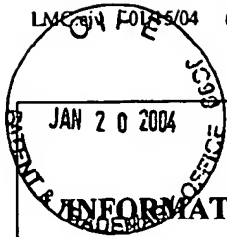
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LV		5,762,751	6/1998	Bleck et al.
		5,763,953	6/1998	Iijima et al.
		5,766,499	6/1998	Blackwell et al.
		5,779,796	7/1998	Tomoeda et al.
		5,779,799	7/1998	Davis
		5,801,444	9/1998	Aboelfotoh et al.
		5,807,493	9/1998	Maki et al.
		5,814,557	9/1998	Venkatraman et al.
		5,815,762	9/1998	Sakai et al.
		5,845,662	12/1998	Sumnitsch
		5,860,640	1/1999	Marohl et al.
		5,868,866	2/1999	Maekawa et al.
		5,873,992	2/1999	Glezen et al.
		5,882,433	3/1999	Ueno
		5,882,498	3/1999	Dubin et al.
		5,885,476	3/1999	Hong et al.
		5,885,755	3/1999	Nakagawa et al.
		5,890,269	4/1999	Gardner et al.
LV		5,893,752	4/1999	Zhang et al.

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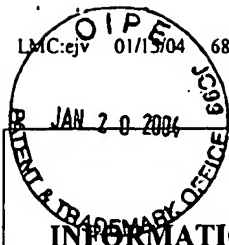
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		5,916,366	6/1999	Ueyama et al.
		5,932,077	8/1999	Reynolds
		5,937,142	8/1999	Moslehi et al.
		5,939,788	8/1999	McTeer
		5,942,035	8/1999	Hasebe et al.
		5,944,894	8/1999	Kitano et al.
		5,952,050	9/1999	Doan
		5,964,954	10/1999	Matsukawa et al.
		5,965,036	10/1999	Maki et al.
		5,969,422	10/1999	Ting et al.
		5,969,424	10/1999	Matsuki et al.
		5,972,192	10/1999	Dubin et al.
		5,989,623	11/1999	Chen et al.
		5,997,653	12/1999	Yamasaka
		6,001,730	12/1999	Farkas et al.
		6,015,749	1/2000	Liu et al.
		6,036,836	3/2000	Peeters et al.
LV		6,037,257	3/2000	Chiang et al.

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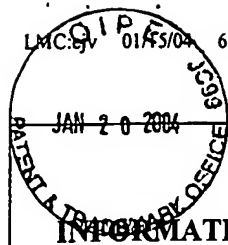
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		6,059,985	5/2000	Yoshimura et al.
		6,066,892	5/2000	Ding et al.
		6,072,163	6/2000	Armstrong et al.
		6,074,544	6/2000	Reid et al.
		6,099,712	8/2000	Ritzdorf et al.
		6,100,195	8/2000	Chan et al.
		6,113,771	9/2000	Landau et al.
		6,121,141	9/2000	Woo et al.
		6,123,825	9/2000	Uzoh et al.
		6,126,761	10/2000	DeHaven et al.
		6,126,989	10/2000	Robinson et al.
		6,136,163	10/2000	Cheung et al.
		6,139,639	10/2000	Kitamura et al.
		6,139,697	10/2000	Chen et al.
		6,184,121	2/2001	Buchwalter et al.
		6,184,137	2/2001	Ding et al.
		6,228,768	5/2001	Woo et al.
LV		6,254,758	7/2001	Koyama

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UV		6,255,228	7/2001	Rolfson
		6,264,752	7/2001	Curtis et al.
		6,268,289	7/2001	Chowdhury et al.
		6,278,089	8/2001	Young et al.
		6,280,183	8/2001	Mayur et al.
		6,290,833	9/2001	Chen
		6,297,154	10/2001	Gross et al.
		6,309,981	10/2001	Mayer et al.
		6,318,385	11/2001	Curtis et al.
		2001/0041447	11/2001	Nogami
		6,331,490	12/2001	Stevens et al.
		6,350,319	2/2002	Curtis et al.
		6,413,436	7/2002	Aegerter et al.
		6,423,642	7/2002	Peace et al.
		6,446,643	9/2002	Curtis et al.
		6,508,920	1/2003	Ritzdorf et al.
UV		6,632,292	10/2003	Aegerter et al.

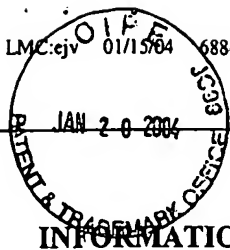
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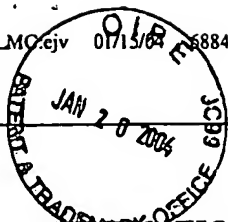
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LV		0 751 567	1/1997	EP
		0 881 673	12/1998	EP
		0 982 771	3/2000	EP
		2 184 288	6/1987	GB
		58-182823	10/1983	JP
		59-208831	11/1984	JP
		60-137016A	7/1985	JP
		60-137016	7/1985	JP
		61-196534	8/1986	JP
		61-196534A	8/1986	JP
		62-166515	7/1987	JP
		63-118093	5/1988	JP
		63-185029	7/1988	JP
		1-120023	5/1989	JP
		1-283845	11/1989	JP
		4-94537	3/1992	JP
		4-131395	5/1992	JP
		4-280993	10/1992	JP
LV		5-21332	1/1993	JP

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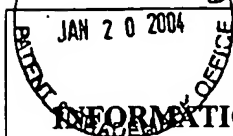
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W		5-13322	1/1993	JP
		5-326483	12/1993	JP
		6-17291	1/1994	JP
		6-45302	2/1994	JP
		52-12576	1/1997	JP
		1-283845	11/1999	JP
		WO 97/12079	4/1997	WIPO
		WO 98/27585	6/1998	WIPO
		WO 99/46064	9/1999	WIPO
W		WO 99/46065	9/1999	WIPO

Examiner's Initials*	Cite No. (optional)	OTHER DOCUMENTS
LV		Ahn, E.C., et al., "Adhesion Reliability of Cu-Cr Alloy Films To Polyimide," Met. Res. Soc. Symp. Proc. Vol. 427, 1996 Materials Research Society, pp. 141-145.
LV		Alers, G.B. et al., "Trade-off between reliability and post-CMP defects during recrystallization anneal for copper damascene interconnects," IEEE International Reliability Physics Symposium, Orlando, Florida 2001, pp. 350-354.
LV		Bunshah et al., Deposition Technologies for Films and Coatings Developments and Applications, Noyes Publications, Park Ridge, NJ, USA, pp. 2-3, 1982.
LV		Gladkikh, A. et. al., "Activation Energy of Electromigration in Copper Thin Film Conductor Lines," Met. Res. Soc. Symp. Proc. 1996 Materials Research Society, pp. 121-133.
LV		Russell, S.W. et al., "The Effect of Copper on the Titanium-Silicon Dioxide Reaction and the Implications for Self-Encapsulating, Self-Adhering Metallization Lines," Materials Research Society Symposium vol. 260--Advanced Metallization and Processing for Semiconductor Devices and Circuits--II (May 1992) pp. 763-769.

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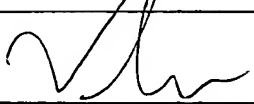
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LV		Mel, Yu-Jane et al., "Thermal Stability and Interaction Between SiO ₂ and Cu Film," Met. Res. Soc. Symp. Proc. vol. 427, 1996 Materials Research Society, pp. 433-439.
		Lucio Columbo, "Wafer Back Surface Film Removal," Central R&D, SGS-Thompson, Microelectronics, Agrate, Italy, 6 pages. No date available.
		Semitool, Inc..COPYRGT., "Metallization & Interconnect," 1998, 4 pages. Month of publication not available.
		Verteq Online.COPYRGT., "Products Overview," 1996-1998, 5 pages. Month of publication not available.
		Laurell Technologies Corporation, "Two control configurations available--see WS 400 or WS-400Lite." Oct. 19, 1998, 6 pages.
		Peter Singer, "Tantalum, Copper Damascene: The Future of Interconnects," Semiconductor International, Jun., 1998, pp.: cover, 91-92, 94, 96 and 98.
		Peter Singer, "Wafer Processing," Semiconductor International, Jun., 1998, p. 70.
LV		Kenneth E. Pitney, "NEY Contact Manual," Electrical Contacts for Low Energy Uses, 1973. Month of publication not available.

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